ABSTRACT OF THE DISCLOSURE

An aeration system for a submerged membrane module has a set of aerators connected to an air blower, valves and a controller adapted to alternately provide a higher rate or air flow and a lower rate of air flow in repeated cycles. In an embodiment, the air blower, valves and controller, simultaneously provide the alternating air flow to two or more sets of aerators such that the total air flow is constant, allowing the blower to be operated at a constant speed. In another embodiment, the repeated cycles are of short duration. Transient flow conditions result in the tank water which helps avoid dead spaces and assists in agitating the membranes.